

Aqueous dispersions of epoxy resins

Description of Technology: The invention relates to aqueous dispersions of modified epoxy resins, which are suitable as binders for aqueous coating Compositions. They are particularly used in the preparation of primer and/or primer surfacer layers in vehicle and in industrial coating.

Patent Listing:

1. **US Patent No. 6,258,875**, Issued on July 10, 2001, "Aqueous dispersions of epoxy resins"
<http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HTO&f=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&col=AND&d=PTXT&s1=6,258,875.PN.&OS=PN/6,258,875&RS=PN/6,258,875>

Market Potential: The mentioned aqueous dispersions of epoxy resins of the prior art can be used in coating compositions, for example in combination with polyamine curing agents in aqueous two-component coating compositions. It is, however, a disadvantage of the aforementioned dispersions of epoxy resins that as binder components in aqueous two-component coating compositions lead to coating formulations which do not have the same high level of quality as the corresponding solvent-based coating formulations. In particular the poor sandability of the obtained coatings has shown to be of considerable disadvantage in the wet as well as in the dry state. The over long drying times, in particular the insufficient through-drying and the unsatisfactory final hardness of the obtained coatings are likewise unfavourable. The adhesion to the substrate is also often unsatisfactory.

The object of the invention was therefore to provide aqueous dispersions of epoxy resins, which, in combination with cross-linking agents, in particular with amino-functional cross-linking agents, can be processed into coating compositions which give the coatings an excellent sandability in the wet as well as in particular in the dry state. The coating compositions should likewise be applicable without difficulty as thick layers and should result in coatings with a rapid through-drying and a good final hardness. A good adhesion to most varied substrates should be assured.

Benefits:

- Higher level of quality
- Greater sandability
- Hard final coating

Applications:

- Preparation of primers for vehicles
- Primer surface layer for vehicles
- Industrial coating

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